

Listing of the Claims:

A listing of the entire set of pending claims is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions and listings of claims in the application.

1. (Previously presented) A method of providing bandwidth fairness in a wireless network that includes a plurality of wireless stations, the method comprising:

determining bandwidth requirement for a particular service interval for each of the wireless stations;

determining an allocated transmission time for each of the wireless stations based on a set physical transmission rate, wherein each of the wireless stations has individually allocated transmission time based on the need of each of the wireless stations; and

fragmenting a packet by at least one of the wireless stations if the at least one wireless station transmits at a transmission rate that is lower than the set physical transmission rate.

2. (Previously presented) A method as recited in claim 1, wherein the allocated time for each of the plurality of wireless stations is proportional to the quantity of data to be sent by the respective stations during a service interval.

3. (Previously presented) A method as recited in claim 1, wherein for each of the at least one wireless station a number of the fragments is equal to the set physical transmission rate divided by the lower transmission rate.

4. (Previously presented) A method as recited in claim 1, wherein the allocated transmission time is equal to the total data of all packets generated in the beacon interval divided by the set physical transmission rate.

5. (Original) A method as recited in claim 1, wherein the wireless network is a multiple physical transmission rate wireless network.

6. (Original) A method as recited in claim 5, wherein the wireless network is a Generalized Packet Radio Service (GPRS) network.

7. (Previously presented) A method as recited in claim 5, wherein the wireless network is a Wireless Local Area Network (WLAN).

8. (Previously presented) A method as recited in claim 1, wherein each of the at least one wireless stations transmits all remaining fragments after all wireless stations that transmit at the set physical transmission rate have completed transmitting their packets.

9. (Previously presented) A method as recited in claim 8, further comprising maintaining a particular quality of service QoS for each of the wireless stations that maintain transmission at the set physical transmission rate during a service interval.

10. (Previously presented) A method as recited in claim 1, wherein each of the at least one wireless stations transmits all remaining fragments until its physical transmission rate is greater than the set physical transmission rate.

11. (Previously presented) A wireless network, comprising:
at least one access point; and
a plurality of wireless stations, wherein in each service interval, the access point allocates a transmission time for each of the wireless stations based on their transmission requirements at a set physical transmission rate that is fixed for the service interval, wherein each of the wireless stations has individually allocated transmission time based on the need of each of the wireless stations; and wherein the plurality of wireless stations transmit at the set physical transmission rate; and wherein if any of the plurality of wireless stations change their transmission rate to a lower transmission rate

than the set physical transmission rate during the service interval, each of the wireless stations that change their transmission rate fragment their respective packets into two or more fragments of equal length.

12. (Cancelled)

13. (Cancelled)

14. (Previously presented) A wireless network as recited in claim 11, wherein the number of fragments is equal to the lower transmission rate divided by the set transmission rate.

15. (Previously presented) A wireless network as recited in claim 11, wherein the transmission time is equal to the total data of all packets generated in the beacon interval divided by the set physical transmission rate.

16. (Original) A wireless network as recited in claim 11, wherein each of the plurality of wireless stations is adapted to transmit at multiple physical transmission rates.

17. (Original) A wireless network as recited in claim 16, wherein the wireless network is a Generalized Packet Radio Service (GPRS) network.

18. (Previously presented) A wireless network as recited in claim 16, wherein the wireless network is a Wireless Local Area Network (WLAN).

19. (Previously presented) A wireless network as recited in claim 11, wherein a particular quality of service (QoS) is maintained for each of the plurality of wireless stations that transmit at the set physical transmission rate for the entire service interval.

20. (Previously presented) A wireless network as recited in claim 11, wherein each of the wireless stations that change their transmission rate to a lower transmission rate than the set physical transmission rate during the service interval send their remaining fragments after all wireless station that transmit at the set transmission rate have completed transmission of their respective packets.